IN THE CLAIMS

Please amend the claims as follows.

1. (previously presented) A circuit in an embedded processing system covering a number of technical applications, a number of operative functions of the number of technical applications being performed via a respective number of application-specific Electronic Control Units (ECU), the circuit comprising:

a) a number of controller means for controlling respective application specific ECUs, each of the controller means comprising a number of application-specific support functions and I/O subsystems; and

b) a number of processor units each having an I/O-interface operatively connecting to a respective one of the controller means and supplying that controller means with computing power,

wherein at least one of the processor units and a respective controller means are implemented on different chips.

2. (previously presented) The circuit according to claim 1, further comprising mapping means for mapping the I/O subsystems to the processor units, and a General Controller Unit operatively coupled to the mapping means and configured to dynamically switch at least one of the processor units into communication with a selected controller means based on processor timing requirements.

3. (previously presented) The circuit according to claim 2, further comprising:

a primary layer comprising basic configuration layout data and an interface means for connecting to the number of processor units; and

a secondary layer comprising a preprogrammed, autonomic state switching means, a preprogrammed emergency switching means, and a port interface means connected to at least one of the I/O subsystems.

4. (previously presented) The circuit according to claim 3, further comprising an additional controller operatively coupled to the General Controller Unit and configured to implement a monitoring function for monitoring the operational status of the processor units and the controller means.

5. (previously presented) The circuit according to claim 1, further comprising a database storing instructions on how to handle specific errors associated with the number of processor units.

6. (previously presented) The circuit according to claim 1, further comprising a number of emergency controllers for continuously storing current global positioning system (GPS) coordinates and configured to send an emergency signal including the coordinates in case a number of external sensor devices detect an emergency case.

7. (previously presented) An embedded system having an electronic circuit according to claim 1.

8. (previously presented) A method of operating an embedded processing system comprising:

controlling a number of electronic control units with a number of interface expander controllers, wherein said interface expander controllers are disposed on a separate chip from said electronic control units; and

providing computing power to said interface expander controllers with a separate number of processors.

9. (previously presented) The method of claim 8, further comprising selectively providing communication between said interface expander controllers and said processors with a General Controller Unit.

10. (previously presented) The method of claim 8, further comprising disposing said interface expander controllers on a single Application Specific Integrated Circuit.

11. (new) An Application-Specific Integrated Circuit (ASIC), comprising:

interface circuitry configured to communicate with a plurality of application-specific subsystems external to said ASIC;

interface circuitry configured to communicate with a plurality of general-purpose processors external to said ASIC; and

controller circuitry communicatively configured to couple each said application-specific subsystem to at least one corresponding said general-purpose processor.

12. (new) The ASIC of claim 11, in which said controller circuitry is further configured to monitor at least one of said general-purpose processors or said application-specific subsystems for at least one anomaly.

13. (new) The ASIC of claim 12, in which said controller circuitry further comprises a database storing instructions of actions to take in response to at least one specific said anomaly.

14. (new) The ASIC of claim 13, said controller circuitry being further configured to dynamically alter said coupling of at least one application-specific subsystem to said at least one corresponding general-purpose processor in response to detecting a said anomaly.

15. (new) The ASIC of claim 14, in which said anomaly comprises a breakdown in a said general-purpose processor.

16. (new) The ASIC of claim 15, in which said controller circuitry is configured to dynamically couple a said application-specific subsystem that was previously coupled to said general-purpose processor experiencing said breakdown to a new said general-purpose processor.

17. (new) The ASIC of claim 16, in which said instructions comprise instructions for prioritizing said application-specific subsystems.

18. (new) The ASIC device of claim 16, in which said instructions comprise instructions to wirelessly transmit a current location of said ASIC device to a recipient.

19. (new) The ASIC device of claim 18, further comprising transmitter circuitry for transmitting said current location of said ASIC device to said recipient.

20. (new) The ASIC device of claim 19, in which said transmitter circuitry comprises a condenser device configured to power said transmitter circuitry if a main source of power for said ASIC device is lost.